

Application Serial. No.: 10/586,562
Attorney Docket No.: 26281-23A

Examiner: J. Goodrow
Art Unit: 1795

REMARKS

Claims 1-4 and 6-9 are currently pending in the instant application. claims 1 and 7 have been amended and claim 5 has been canceled.

Claims 1, 4 and 5 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite because the parts by weight of the inorganic particles to the toner do not point out the amount of the particles.

In response, Applicant has amended claim 4 to recite "a total quantity" of the inorganic particles instead of "an added quantity of the inorganic particles to more clearly recite this feature of the invention. Support for this change can be found in ¶[0011] of the disclosure.

In addition, as to the rejection of claim 1, Applicant respectfully disagrees that the claim language is indefinite. While the parts by weight of the inorganic particles to the toner do not point out the amount of the particles, the quantity of concern in this claim is the quantity (as a percentage by weight) of the inorganic particles that are in a floating state (i.e., not adhered to the toner particles). In other words, 10 weight% to 25 weight% of the inorganic particles are not adhered to the toner particles and are in a floating state. Thus, it is clear that the claim language is not indefinite and reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 112, second paragraph as being indefinite is respectfully requested.

Claims 1-9 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2002/0048468 to Sakaizawa in view of U.S. Patent Publication No. 2003/0031482 to Nagai, U.S. Patent Publication No. 2003/0054275 to Sugimoto and U.S. Patent No 6,287,739 to Kawakami. Applicant respectfully disagrees.

Sakaizawa is directed to an image forming apparatus including a specific contact charging/cleaning roller with a cleaning particle to prevent the non-uniformity charging

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and to neglect the normal cleaning means and having a toner with specific shape factors SF-1 and SF-2.

In contrast, the present invention uses the corona-type charging means which is not contacted with the drum as in Sakaizawa. Therefore, it is not necessary to adjust the frequency of the oscillating voltage and a peripheral speed to meet the specific relation equation as in Sakaizawa.

Furthermore, Sakaizawa does not disclose the quantity of the floating inorganic particles which is measured by a microwave induced plasma emission spectrophotometry method as described and claimed in the present invention. Accordingly, Applicant respectfully submits that the unexpected effect as demonstrated in Figure 1 (toner adhesion level versus number isolation ratio of TiO_2) of the present invention cannot be obtained by Sakaizawa.

Finally, Sakaizawa also does not refer to the specific objectives according to the present invention by setting the shape factors SF-1 and SF-2. For all of these reasons, the present invention is believed distinguish over Sakaizawa.

Secondly, Nagai is directed to a developing apparatus including a developer supporting member with a specific surface roughness Rz. However, Nagai does not refer to the specific shape factors SF-1 and SF-2 for the toner and also does not describe or suggest the quantity of floating inorganic particles as described and claimed in the present invention. Therefore, the unexpected effect as demonstrated in Figure 1 of the present invention also cannot be obtained by Nagai. Furthermore, Applicant respectfully submits that Nagai cannot be combined with Sakaizawa in the manner indicated by the Examiner because Sakaizawa and Nagai utilize very different constitutions and objectives.

Finally, Nagai does not refer to the inventive toner and thus cannot anticipate or render obvious the claimed invention alone or in combination with Sakaizawa.

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Sugimoto also does not describe or suggest all of the features of the claimed invention. Sugimoto is directed to a magnetic toner including a specific magnetic powder. However, Sugimoto does not refer to the specific quantity of the floating inorganic particles to the toner and thus does not refer to the inventive toner. In addition, Sugimoto does not refer to the shape factors SF-1 and SF-2 for the toner. Therefore, as discussed with regards to Sakaizawa and Nagai, Sugimoto also does not demonstrate the unexpected effect as demonstrated in Figure 1 of the present invention. In addition, Sugimoto also cannot be combined with Sakaizawa and Nagai in the manner suggested by the Examiner because there are significant differences in the constitutions and objectives of the references.

Kawakami is directed to a toner including three types of specific external additives (small SiO₂, larger SiO₂, and Al₂O₃). However, Kawakami does not refer to the specific quantity of the floating inorganic particles to the toner and further does not refer to the specific shape factors SF-1 and SF-2 for the toner. Thus, Applicants respectfully submit that Kawakami also does not demonstrate the unexpected effect as demonstrated in Figure 1 of the present invention. Finally, Applicants further submit that Kawakami cannot be combined with Sakaizawa and Nagai in the manner suggested by the Examiner because there are significant differences with regards to constitutions and objectives.

Even if the cited references could be combined in the manner suggested by the Examiner, which Applicant believes they cannot, none of the cited references, alone or in combination describe or suggest the specific quantity of the floating inorganic particles to the toner and thus the combination of references still does not describe or suggest all of the features of the claimed invention. Furthermore, there are also no references to the combination of the toner having the specific shape factors SF-1 and SF-2 with the specific quantity of the floating inorganic particles to the toner.

Finally, claims 7-9 stand rejected on the grounds of non-statutory obviousness-type

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double patenting as allegedly being unpatentable over claims 1-7 of co-pending application Serial No. 11/727,671.


Applicant respectfully disagrees that the claims as presently amended are not patentably distinct from claims 1-7 of the co-pending '671 application, because the '671 patent does not suggest the feature of a method of magnetic monocomponent development which is used for an image forming apparatus providing a corona charging instrument or the feature of a quantity of particles which are in a floating state and are measured by using a microwave induced plasma emission spectrophotometry method. Therefore, Applicant respectfully submits that the presently amended claims are patentably distinct from the claims of the '671 application and respectfully requests that the rejection of claims 7-9 on the grounds that the claims are not patentably distinct from claims 1-7 of the '671 application be withdrawn.

CONCLUSION

Applicant believes that the foregoing is a full and complete response to the Office action of record. Accordingly, an early and favorable reconsideration of the rejection of the claims is requested. Applicants believe that claims 1-4 and 6-9 are now in condition for allowance and an indication of allowability and an early Notice of Allowance of all of the claims is respectfully requested.

If Examiner feels that a telephonic interview would be helpful, he is requested to call the undersigned at (203) 575-2648 prior to issuance of the next Office action.

Respectfully submitted,

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